

Notice of Allowability

Application No.

10/630,107

Examiner

Alysa N. Brautigam

Applicant(s)

HORTON ET AL.

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 15 August 2005.
2. ☒ The allowed claim(s) is/are 1-7, 12, 13, 16, 18-25 and 29.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jon Holland (Registration No. 41,077) on 30 September 2005.

The application has been amended as follows:

2. Please **AMEND** Claim 20, Line 9 as follows:

INSERT -- "for use in displaying a graphical image" --

AFTER -- "compatible with a form of the non-selected texture map portion" --

Claim 20 should read as follows:

20. A texture mapping method, comprising:

determining a texture map type of a first texture map and a texture map type of a parametric texture map;

combining at least a portion of the first texture map and at least a portion of the parametric texture map;

prioritizing the texture map portions based on the determined texture map types;

selecting one of the texture map portions based on the prioritizing; and

converting, based on the selecting, the selected texture map portion into a form compatible with a form of the non-selected texture map portion for use in displaying a graphical image.

3. Please **AMEND** Claim 29, Line 7 as follows:

INSERT -- “thereby forming a combined texture map to be used for displaying a graphical image” --

AFTER -- “combining the first texture map portion and the parametric texture map” –

Claim 29 should read as follows:

29. A texture mapping method, comprising:

converting at least a portion of a first texture map into a form compatible with a form of at least a portion of a parametric texture map;

determining a texture map type of the first texture map and a texture map type of the parametric texture map;

prioritizing the texture maps based on the determining; and

combining the first texture map portion and the parametric texture map
thereby forming a combined texture map to be used for displaying a graphical
image.

Allowable Subject Matter

4. Claims 1-7, 16, and 20-25 are allowed.
5. The following is an examiner's statement of reasons for allowance:
6. While prior art clearly teaches memory for storing texture maps and parametric texture maps as well texture map managers to convert and combine texture maps, prior art fails to teach or suggest, either alone or in combination, a texture mapping system comprising a texture map manager configured to "determine a texture map type for the first texture map and a texture map type for the parametric texture map and to perform a prioritization of the texture map portions based on the determined texture map types." In addition, prior art does not teach or suggest the "texture map manager further configured to select, for conversion, one of the texture map portions **based on the prioritization.**"

7. Claims 12-13, 18-19, and 29 are allowed.
8. The following is an examiner's statement of reasons for allowance:
9. While prior art clearly teaches memory for storing texture maps and parametric texture maps as well texture map managers to convert and combine texture maps, prior art fails to teach or suggest, either alone or in combination, a texture mapping system

comprising a texture map manager configured to “determine a texture map type for the first texture map and a texture map type for the parametric texture map and to perform a prioritization of the texture map portions based on the determined texture map types.” In addition, prior art does not teach or suggest the “texture map manager further configured to select the first texture map for conversion **based on the prioritization.**”

10. The closest prior art, although not entirely as claimed, discloses the background of polynomial texture maps (equivalent to Applicant's parametric texture maps) including the desirability of combining texture maps and conversion of texture maps from one type to another.

11. Malzbender et al. (“Polynomial Texture Maps”) discloses the acquisition of polynomial texture maps by means of photographic equipment. Malzbender also discloses the conversion of bump maps to polynomial texture maps and the combination of a plurality of texture maps. However, Malzbender does not teach or suggest the determination of texture map type by a texture map manager nor does Malzbender disclose prioritization and conversion based on said prioritization.

12. Malzbender et al. (U.S. Patent Application Number : 2002/0060679) discloses a method and apparatus for 3D objects with parametric texture maps including one embodiment in which “a parametric texture map may be adapted to a particular color channel of a display” and wherein “different blending modes” can be used to combine “parametric texture map evaluation results with calculated lighting, texture maps, or other sources during texture blending.” However, Malzbender does not teach or

suggest the determination of texture map type by a texture map manager nor does Malzbender disclose prioritization and conversion based on said prioritization.

13. Hel-Or et al. ("Synthesis of Reflectance Function Textures from Examples") discloses a method for leveraging the image-based representation of polynomial texture maps for the purposes of synthesizing textures. Hel-Or discloses wherein the polynomial texture maps can be used in place of conventional texture maps and applied to 3D objects. Hel-Or further discloses the plurality of texture map forms similar to that disclosed by Applicant. However, Hel-Or does not teach or suggest the determination of texture map type by a texture map manager nor does Hel-Or disclose prioritization and conversion based on said prioritization.

14. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alysa N. Brautigam whose telephone number is 571-272-7780. The examiner can normally be reached on 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

anb



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